WHAT IS CLAIMED IS:

1. A magnetoresistive element comprising a multilayer film configuration comprising: a tunnel insulation layer; and a pair of magnetic layers that are laminated with the tunnel insulation layer interposed therebetween,

wherein a resistance value of the magnetoresistive element varies with a relative angle between magnetic orientations of both of the magnetic layers, and

at least one of the magnetic layers comprises a magnetic film having a thermal expansion coefficient not greater than a value obtained by adding 2×10^{-6}/K to a thermal expansion coefficient of the tunnel insulation layer.

2. The magnetoresistive element according to claim 1, wherein the thermal expansion coefficient of the magnetic film is not greater than the thermal expansion coefficient of the tunnel insulation layer.

3. The magnetoresistive element according to claim 1, wherein the magnetic film is in contact with the tunnel insulation layer.

4. The magnetoresistive element according to claim 1, wherein the tunnel insulation layer comprises at least one compound selected from the group consisting of an oxide, a nitride and an oxynitride of Al.

5. The magnetoresistive element according to claim 1, wherein the magnetic film comprises an invar alloy.

6. The magnetoresistive element according to claim 1, wherein the magnetic film comprises an amorphous alloy containing Fe as a main component.

7. The magnetoresistive element according to claim 5, wherein the invar alloy has a composition represented by the formula Fe_x–Ni_y–Co_z,

where, in the formula Fe_x–Ni_y–Co_z, x, y and z are numbers satisfying the following relationships:

$x + y + z = 1$,

$0.5 \leq x \leq 0.7$,

$0.3 \leq y \leq 0.45$, and
$0 \leq z \leq 0.2$.

8. The magnetoresistive element according to claim 5, wherein the invar alloy has a composition represented by the formula Fe_{1-a}–Pt_a,

where, in the formula Fe_{1-a}–Pt_a, a is a number satisfying the following relationship:

$0.15 \leq a \leq 0.45$.

9. The magnetoresistive element according to claim 5, wherein the invar alloy has a composition represented by the formula Fe_{1-b}–Pd_b,

where, in the formula Fe_{1-b}–Pd_b, b is a number satisfying the following relationship:

$0.2 \leq b \leq 0.45$.

10. The magnetoresistive element according to claim 6, wherein the amorphous alloy has a composition represented by the formula Fe_{1-c}–M_c,

where, in the formula Fe_{1-c}–M_c, M denotes at least one element selected from the group consisting of B, P, Si, Zr and Hf, and

c is a number satisfying the following relationship:

$0.05 \leq c \leq 0.3$.

11. The magnetoresistive element according to claim 1, further comprising an antiferromagnetic layer.

12. The magnetoresistive element according to claim 11, wherein the antiferromagnetic layer comprises Mn.

13. A magnetic head, comprising:

the magnetoresistive element according to claim 1; and

a shield for restricting introduction of a magnetic field other than a magnetic field to be detected by the magnetoresistive element into the magnetoresistive element.

14. A magnetic head, comprising:

the magnetoresistive element according to claim 1; and

a yoke for introducing a magnetic field to be detected by the

magnetoresistive element to the magnetoresistive element.

15. A magnetic memory, comprising:

the magnetoresistive element according to claim 1;

conductive lines for recording information on the magnetoresistive element; and

conductive lines for reading out the information.

16. A magnetic recording apparatus, comprising:

the magnetic head according to claim 13; and

a magnetic recording medium from which magnetic information can be read out by the magnetic head.

17. A magnetic recording apparatus, comprising:

the magnetic head according to claim 14; and

a magnetic recording medium from which magnetic information can be read out by the magnetic head.